## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

## **ARTICLE DETAILS**

TITLE (PROVISIONAL)	Ageing as a Mindset: A Study Protocol to Rejuvenate Older Adults
	with a Counterclockwise Psychological Intervention
AUTHORS	Pagnini, Francesco; Cavalera, C; Volpato, Eleonora; Comazzi,
	Benedetta; Vailati Riboni, Francesco; Valota, Chiara; Bercovitz,
	Katherine; Molinari, Enrico; Banfi, Paolo; Phillips, Deborah;
	Langer, Ellen

# **VERSION 1 - REVIEW**

REVIEWER	Thomas Leyhe
	University of Basel, Geriatric Psychiatry, Department of Geriatric
	Medicine FELIX PLATTER, and Center of Old Age Psychiatry,
	Psychiatric Unviersity Hospital, Basel, Switzerland
REVIEW RETURNED	11-Apr-2019

GENERAL COMMENTS	In the presented manuscript the authors describe the protocol of a study with the aim to investigate whether changes in mindsets can change the ageing process. Participants shall be instructed and helped to relive their younger selves, acting as if they are living in the year 1989. The week-long residential program shall be tested as a randomized control trial comprised of the experimental ("counterclockwise") group, an active control group (same activities, no time manipulation), and a no-treatment group. Ninety participants shall be randomly allocated to one of these three conditions. Every participant shall be assessed for medical, cognitive, psychological, and age appearance at four time points: at the time of recruitment, after the intervention (i.e., after a week for the no-treatment group), and again after 6 and 12 months. This is an interesting and well-designed study protocol with clear hypotheses.
	I have just some minor concerns:
	Page 8, line 18
	The authors will proof the absence of cognitive impairment, as assessed with a Mini Mental State Examination score > 18. As the total score is 30 I think > 28 is more appropriate.
	Page 9, line 9
	The authors write: "Subjects will participate in a 6-day Counterclockwise Retreat in a retrofitted physical environment circa 1989, which helps the participant psychologically return to a time before diagnosis to re-experience their younger self." Which diagnosis is meant?

Page 15, Line 2:
The authors will assess memory with the Babcock Story Recall Test. Are there parallel versions of this test available? This would be necessary to avoid learning effects particularly for the second testing after one week.

REVIEWER	Chiara ruini
	Department of Psychology, university of Bologna, italy
REVIEW RETURNED	14-May-2019

GENERAL COMMENTS	this research protocol apprears innovative, interesting and with promising results. the authors shoud just provide more details on the recruitment and assessment procedures.  -who will assess potential participants according to the inclusion criteria? (p.7, lines 14-28) Which instruments (interviews?) will be used to evaluate the presence of actual and 1980 traumatic events? Please provide details  Further more, at p.8, line 8 the Authors stated:"which helps the participant psychologically return to a time before diagnosis to reexperience their younger self". What diagnosis do Authors refer to? this is not clear, since the inclusion criteria do not allow chronic illnesses or major health issues reported by participants. please
	provide clarifications to this statement.

#### **VERSION 1 – AUTHOR RESPONSE**

Reviewer(s)' Comments to Author:

Reviewer: 1

Reviewer Name: Thomas Leyhe

Institution and Country: University of Basel, Geriatric Psychiatry, Department of Geriatric Medicine FELIX PLATTER, and Center of Old Age Psychiatry, Psychiatric Unviersity Hospital, Basel, Switzerland

Please state any competing interests or state 'None declared': None delcared.

Please leave your comments for the authors below

In the presented manuscript the authors describe the protocol of a study with the aim to investigate whether changes in mindsets can change the ageing process. Participants shall be instructed and helped to relive their younger selves, acting as if they are living in the year 1989. The week-long residential program shall be tested as a randomized control trial comprised of the experimental ("counterclockwise") group, an active control group (same activities, no time manipulation), and a notreatment group. Ninety participants shall be randomly allocated to one of these three conditions. Every participant shall be assessed for medical, cognitive, psychological, and age appearance at four time points: at the time of recruitment, after the intervention (i.e., after a week for the no-treatment group), and again after 6 and 12 months. This is an interesting and well-designed study protocol with clear hypotheses.

I have just some minor concerns:
Page 8, line 18
The authors will proof the absence of cognitive impairment, as assessed with a Mini Mental State Examination score > 18. As the total score is 30 I think > 28 is more appropriate.
Thanks for noticing this point. We modified the cut-off score to 24, which reflect a sensitivity of .85 and a specificity of .90, according to a 2016 Cochrane review (see citation below).
Creavin ST et al, Mini-Mental State Examination (MMSE) for the detection of dementia in clinically unevaluated people aged 65 and over in community and primary care populations. Cochrane Database of Systematic Reviews 2016, Issue 1. Art. No.: CD011145. DOI: 10.1002/14651858.CD011145.pub2)
Page 9, line 9
The authors write: "Subjects will participate in a 6-day Counterclockwise Retreat in a retrofitted physical environment circa 1989, which helps the participant psychologically return to a time before diagnosis to re-experience their younger self." Which diagnosis is meant?
Good catch! That is a sort of Freudian lapsus, a mistake in our writing. Of course, there is no diagnosis involved in the study we have deleted it.
Page 15, Line 2:
The authors will assess memory with the Babcock Story Recall Test. Are there parallel versions of this test available? This would be necessary to avoid learning effects particularly for the second testing after one week.
Yes, we are using the parallel versions (we have now specified it in the text)

Reviewer: 2

Reviewer Name: Chiara ruini

Institution and Country: Department of Psychology, university of Bologna, italy

Please state any competing interests or state 'None declared': None declared

Please leave your comments for the authors below

this research protocol apprears innovative, interesting and with promising results. the authors shoul just provide more details on the recruitment and assessment procedures.

-who will assess potential participants according to the inclusion criteria? (p.7, lines 14-28) Which instruments (interviews?) will be used to evaluate the presence of actual and 1980 traumatic events? Please provide details

Thanks, we have now included more details in the text.

Further more, at p.8, line 8 the Authors stated:" ....which helps the participant psychologically return to a time before diagnosis to re-experience their younger self". What diagnosis do Authors refer to? this is not clear, since the inclusion criteria do not allow chronic illnesses or major health issues reported by participants. please provide clarifications to this statement.

As reported for Reviewer 1... Good catch! That is a sort of Freudian lapsus, a mistake in our writing. Of course, there is no diagnosis involved in the study... we have deleted it.

## **VERSION 2 - REVIEW**

REVIEWER	Thomas Leyhe University of Basel, Geriatric Psychiatry, Department of Geriatric Medicine FELIX PLATTER, and Center of Old Age Psychiatry, Psychiatric Unviersity Hospital, Basel, Switzerland
REVIEW RETURNED	21-May-2019
GENERAL COMMENTS	The authors addressed my concerns sufficiently. Just correct an omission: Instead of "To learning effects between the first two assessments, two parallel versions will be used" it should be written "To avoid learning effects between the first two assessments, two parallel versions will be used".

REVIEWER	chiara ruini
	Department of Psychology, University of Bologna, Italy
REVIEW RETURNED	29-May-2019

GENERAL COMMENTS the paper in this revised form is ready for publication	and paper in this review form to ready for publication
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